L Numbe		Search Text	DB	Time stamp
-	79	laser with gyroscop\$9 with (ring or round or circular\$4 or circle or	USPAT;	2004/05/05 13:0
		toroid\$9) and (borehole or (bore adj3 hole) or bottomhole or (bottom adj3	US-PGPUB	
		hole) or drill drilling survey surveying)		•
•	53	gyroscop\$9 with fluid with flow\$4	USPAT;	2004/05/05 13:0
			US-PGPUB	:
-	49	(gyroscop\$9 with fluid) and (borehole or (bore adj3 hole) or bottomhole or	USPAT;	2004/05/05 13:04
		(bottom adj3 hole) or drill drilling survey surveying)	US-PGPUB	
•	9	gyroscop\$9 with fluid with passage\$6	USPAT;	2004/05/05 13:04
		•	US-PGPUB	
-	161	(borehole or (bottom with hole)) and gyroscop\$9 same accelerometer and	USPAT;	2004/05/05 13:04
		(drill drilling survey surveying)	US-PGPUB	
•	59	((optic\$9 or fiber\$9 or fiberoptic\$9 or fiber\$1optic) same gyroscop\$9	USPAT;	2004/05/05 13:04
		same (ring or circular\$4 or circle or toroid\$9)) and (drill drilling survey	US-PGPUB	
	Ì	surveying)		
_	74	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	USPAT;	2004/05/05 13:04
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	2004/05/05 15:0
		("4712306") or ("4682421") or ("4594790") or ("4542647") or	CSTGICE	
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		
		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.	,	
		((175/45).CCLS.)) and gyroscop\$9 same (normal perpendicular\$4 right		
		orthogonal\$4) with (spin\$5 or rotat\$7) with axis		
	20	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	LICDATE	2004/05/05 12 0
-	20		USPAT;	2004/05/05 13:0
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	
•	1	("4712306") or ("4682421") or ("4594790") or ("4542647") or		
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		<u> </u>
•		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		1 4.44
		((175/45).CCLS.)) and gyroscop\$9 same (tool or instrument or equipment		
		or housing) with (normal perpendicular\$4 right orthogonal\$4) with (spin\$5		
4		or rotat\$7) with axis	· ·	
	15	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	USPAT;	2004/05/05 13:04
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	
		("4712306") or ("4682421") or ("4594790") or ("4542647") or		
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		
		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
•		((175/45).CCLS.)) and (mwd or (measur\$9 adj while adj drilling)) and		
		gyroscop\$9 same (normal perpendicular\$4 right orthogonal\$4) same		
		(spin\$6 or rotat\$6)		
	60	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	USPAT;	2004/05/05 13:04
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	
		("4712306") or ("4682421") or ("4594790") or ("4542647") or	00.00	
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		
		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
v		((175/45).CCLS.)) and (mwd or (measur\$9 adj3 drilling) or		
	İ	measur\$drilling) and gyroscop\$9		
	15	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	LICDAT.	2004/05/05 12 0
	13	("5294972") or ("5155916") or ("5012412") or ("4812977") or	USPAT;	2004/05/05 13:04
	-		US-PGPUB	
	1	("4712306") or ("4682421") or ("4594790") or ("4542647") or		
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302	. •	
		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
	1	((175/45).CCLS.)) and (mwd or (measur\$9 adj3 drilling) or		
		measur\$drilling) and gyroscop\$9 same (normal perpendicular\$4 right	**	`
	-	orthogonal\$4) with (spin\$5 or rotat\$7) with axis		
	136	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	USPAT;	2004/05/05 13:04
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	
		("4712306") or ("4682421") or ("4594790") or ("4542647") or		
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		
	].	33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
		((175/45).CCLS.)) and gyroscop\$9 and (tool or instrument or equipment or		
		housing or case or casing or shell) with (spin\$5 or rotat\$7) with axis		1

	•	·	. *	•
-	32	1 ( 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	USPAT	2004/05/05 13:04
		"4472884"   "4542647"   "4559713"   "4594790"   "4611405"   "4682421"		
1.		"4706388"   "4709486"   "4761889"   "4819336"   "4833787"   "4894923"		
		"4909336"   "4920655"   "4956921"   "4999920"   "5155916"   "5321893"		
		"5432699"   "5435069"   "5452518"   "5564193"   "5623407"   "5657547"		
	i	"5679894"   "5806194").PN.		
-	26		USPAT;	2004/05/05 13:56
İ		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	
		("4712306") or ("4682421") or ("4594790") or ("4542647") or		
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		
		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
		((175/45).CCLS.)) and (tool or instrument or equipment or housing or case		,
		or casing or shell) with (spin\$5 or rotat\$7) with axis and (gyroscop\$9 same		
	1	(tool or instrument or equipment or housing or case or casing or shell) with		
		(normal perpendicular\$4 right orthogonal\$4) with (spin\$5 or rotat\$7))		
_	15		USPAT;	2004/05/05 12:04
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	2004/05/05 13:04
		("4712306") or ("4682421") or ("4594790") or ("4542647") or	US-FUFUB	
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		
		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
		((175/45).CCLS.)) and (mwd or (measur\$9 adj3 drilling) or		
	ļ	measur@drilling\ and (auroscop@0 with (named a reason of the land)		
		measur\$drilling) and (gyroscop\$9 with (normal perpendicular\$4 right		
	21	orthogonal\$4) with (spin\$5 or rotat\$7))		1
	21	(mwd or (measur\$9 adj3 drilling) or measur\$drilling) and (gyroscop\$9	USPAT;	2004/05/05 13:04
	2.4	with (normal perpendicular\$4 right orthogonal\$4) with (spin\$5 or rotat\$7))	US-PGPUB	
•	34	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	USPAT;	2004/05/05 13:04
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	
		("4712306") or ("4682421") or ("4594790") or ("4542647") or		*
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302		
		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
		((175/45).CCLS.)) and (earth with rotation) and ((local or frame) with		
		orient\$7)		
-	6	(((("6021577") or ("5787997") or ("5452518") or ("5435069") or	USPAT;	2004/05/05 13:06
		("5294972") or ("5155916") or ("5012412") or ("4812977") or	US-PGPUB	
		("4712306") or ("4682421") or ("4594790") or ("4542647") or		
		("4450406") or ("4371838") or ("4361192") or ("4163324")).PN.) 33/302	•	
,		33/304 33/308 33/310 33/312 33/313 33/324 33/624,625.ccls.		
		((175/45).CCLS.)) and gyroscop\$7 and gyroscop\$7 same rotat\$9 same		
		pitch same axis and azimuth and accelero\$9 same pitch		
-	· 22	laser with gyroscop\$9 with (ring or toroid\$9) same (center or central\$4)	USPAT;	2004/05/05 13:07
		with (bore aperture opening hole)	US-PGPUB	
-	6	(optic\$9 or fiber\$9 or fiberoptic\$9 or fiber\$1 optic) with gyroscop\$9 with	USPAT;	2004/05/05 13:07
		(ring or toroid\$9) same (center or central\$4) with (bore aperture opening	US-PGPUB	
		hole)		
-	9	(optic\$9 or fiber\$9 or fiberoptic\$9 or fiber\$1 optic or laser) with	USPAT;	2004/05/05 13:07
		gyroscop\$9 with (ring or toroid\$9) same fluid	US-PGPUB	
-	3	gyroscop\$9 with (center or central\$4) with (bore aperture opening hole	USPAT;	2004/05/05 13:07
		passage passageway) with fluid	US-PGPUB	200 11 031 03 13.07
	25	((fiber\$9 or fiberoptic\$9 or fiber\$1optic) same gyroscop\$9 same (ring or	USPAT;	2004/05/05 13:07
		circular\$4 or circle or toroid\$9)) and (drill drilling survey surveying)	US-PGPUB	2007/02/03 13:07
-	74	(borehole or (bottom with hole)) and gyroscop\$9 same accelerometer and	USPAT;	2004/05/05 13:07
	''	(drill drilling survey surveying) and velocity	US-PGPUB	2004/03/03 13:07
-	. 19	(borehole or (bottom with hole)) and gyroscop\$9 same accelerometer and	USPAT;	2004/05/05 12:07
	'	(drill drilling survey surveying) and velocity and kalman		2004/05/05 13:07
_	19	gyroscope same accelerometer and angular\$6 same rotat\$7 same	US-PGPUB	2004/05/05 12 02
	, ,	accelera\$7 same (coordinate adj2 system)	USPAT;	2004/05/05 13:07
_	75	((fiber\$9 adj optic\$9) or fiberoptic\$9 or fiber\$loptic) same gyroscop\$9	US-PGPUB	2004/05/05 12 05
	· '3	same advantages	USPAT;	2004/05/05 13:07
-	269	(two or (first and second)) same gyroscop\$9 and accelerometer same	US-PGPUB	2004/05/25 12 25
	1 209	time of this and second), same gyroscops and accelerometer same	USPAT;	2004/05/05 13:07
	1	(vertical\$5 or plumb or gravity or gravitational)	US-PGPUB	